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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,041

11/29/2006

Sanjay Kalhan

3285-01

5326

26645

7590

03/03/2009

THE LUBRIZOL CORPORATION  
ATTN: DOCKET CLERK, PATENT DEPT.  
29400 LAKELAND BLVD.  
WICKLIFFE, OH 44092

EXAMINER

OLADAPO, TAIWO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,041	<b>Applicant(s)</b> KALHAN ET AL.	
	<b>Examiner</b> TAIWO OLADAPO	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vickerman (US 5,670,081) in view of Eckard et al. (US 6,225,267)

4. In regards to claims 1, 2, 7, 8, 15, Vickerman teaches emulsifier blends comprising a salt formed from a high molecular weight polycarboxylic acylating agent having from 20 to 500 carbons (A)(I) reacted with a low molecular weight polycarboxylic acylating agent having up to 18 carbons (B)(I), and a compound (C) comprising amino two or more primary or secondary amino groups or hydroxyl groups, wherein the ratio of (B)(I) to (A)(I) is in the range of 2.5 to 1 or larger (column 2 lines 32 – 56). The range of (B)(I) components overlaps the range in the claimed invention. In the case where the claimed ranges “overlap or lie inside ranges disclosed

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by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Vickerman teaches that the salt produced is used in 70% of an emulsifier composition (column 22 lines 66 – 67). Vickerman teaches the composition comprises sulfonates but does not recite the sulfonates are arene sulfonates (column 22 line 44). Eckard teaches emulsifiers for use in metal working lubricants similar to the invention of Vickerman (title, column 2 lines 63 – 66). Eckard teaches that the emulsifiers can contain blends having branched alkyl aryl sulfonate of from about 10 to 20 wt. %, and linear alkyl aryl sulfonates of from about 20 to 30 wt. %, or a total of from 30 to 50% alkyl aryl sulfonates which meets the claimed ranges (column 4 lines 21)

It would have been obvious for one of ordinary skill in the art at the time of the invention to have used the alkyl aryl sulfonates of Eckard in the alkyl sulfonate emulsifier composition of Vickerman; because Eckard teaches they are suitable as emulsifiers for lubricating oils.

5. In regards to claim 3, Vickerman and Eckard combined teach the composition wherein poly(isobutylene) groups is used to prepare high molecular weight component (A)(I) (Vickerman, column 20, Example 1).

6. In regards to claims 4, 5, Vickerman and Eckard combined teach the composition comprising (B)(I) prepared from hydrocarbyl groups having an overlapping range of carbons as previously recited.

7. In regards to claim 6, Vickerman and Eckard combined teach the composition wherein the hydrocarbyl groups of (B)(I) comprise i.e. C<sub>12-18</sub> alpha olefins (Vickerman, column 3 lines 58 – 67; column 4 lines 1 – 30).

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8. In regards to claims 9, 10, 12, Vickerman and Eckard combined teach the composition wherein component (C) is polyol such as polyhydric alcohol i.e., ethylene glycol (Vickerman, column 12 lines 64 – 67, column 14 lines 8 – 11)
9. In regards to claim 11, Vickerman and Eckard combined teach the composition comprising amino groups such as mono, di, and triethanol amine (Vickerman, column 16 lines 4 – 5).
10. In regards to claim 13. Vickerman and Eckard combined teach the composition comprising diols such as glycols which meets the compound(s) having the limitations of the formula recited, as previously stated.
11. In regards to claim 14, Vickerman and Eckard combined teach the composition having the components recited as previously stated.
12. In regards to claims 16, 17, Vickerman and Eckard combined teach the composition wherein the counterion is used for making the product. Since the counterion is a non-limiting reagent, an excess would be used in order to ensure a higher percent conversion of [A][I] and [B][I] reactants.
13. In regards to claim 18, Vickerman and Eckard combined teach the oil in water emulsion comprising the components recited as previously stated.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Glenn A Caldarola/  
Acting SPE of Art Unit 1797